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THE MACDONALD LASSIE

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AUGUST 1974

Macdonald Journal
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Photo by Bowe, Montreal.
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Journal Jottings

We had planned to use the new aerial photograph of Macdonald College on the cover of an upcoming issue of the Journal. It is the first photo that I have seen that shows the entire College; we found it a fascinating shot and thought our readers would also find it of interest. As for this issue, I have to resort to the well-known fisherman's tale about "the one that got away" Except this time it was not an elusive fish but a fast-flying plane that eluded our efforts. When we learned that a small, single-engine crop-spraying plane was going to be used on a still, early evening to spray herbicides and fertilizer on a few of the fields of the Macdonald College Farm, we quickly loaded three cameras and took off in search of a cover shot. My best opportunity for a prize-winner was somewhat marred by the fact that instead of clicking the shutter as the plane approached (using me as an approach target!) I lost my cool, which I thought was better than losing my head, and took off for the ditch — fast. To reiterate, we did not get a cover photo, but we did feel you might like to see this photo that Prof. Walker Riley took with the aid of a telescopic lens. That is what I'd calling flying low. I still think crop spraying would make a good cover, with possibly an accompanying article. We'll keep it in mind for a future issue.

Hazel M. Clarke.

Editorial

On June 7, 8, and 9, a group of approximately 40-50 people met at Macdonald College for a weekend of conferences and discussions regarding the opportunities and problems facing the English-speaking rural communities in Quebec. This gathering provided a fairly good sounding board as to what English-speaking people across Quebec have on their minds as the participants came from a variety of different backgrounds — from newspaper editors to housewives to students to farmers — and from all regions of Quebec — from the Gaspe to Pontiac County.

A lot of different ideas were discussed but a number of specific topics seemed to stand out more than others. Most came to the conference with the implications of Quebec's proposed new language policy foremost on their minds. This was probably only natural since the policy proposal was announced just prior to the conference. But interestingly these rural peoples' reactions to Bill 22 were somewhat different than the reactions of most urban people we have all been reading about in newspapers and seeing on television. Instead of viewing the proposed Bill as a threatening force that would deprive them of some of their basic rights, many took the view that it was a signal that the rural English-speaking people had to break its traditional isolation from the French-speaking majority if there is any hope of preserving an English-speaking culture in rural Quebec. This was a view expressed particularly by the younger people at the conference.

It is encouraging to note that the younger people in our rural communities are taking a positive approach to what could be a difficult adjustment for the rural community. It is very important if rural communities are to maintain their way of life that they look upon such developments in a positive manner and try to determine how they can be made into opportunities. To continually think in terms of problems when discussing the future of rural communities often means that we become so pessimistic that we fail to realize that there may be just as many opportunities facing that community. It takes a positive attitude to be able to recognize and cash in on some of these opportunities.

A second observation to come out of the conference was that some people expect government to solve many of the problems facing the rural community either through creating a new program or agency or by making money available to the community. This can and does happen in isolated instances, but it could be a strategic mistake to rely on government spending to deal with rural social problems. Government programs tend to be directed into those areas where there is the greatest political power, and in recent years this has not always been rural Quebec.

The task of maintaining a rural community culture is going to have to rest with the people actually living in these communities. No one else is likely to do the job for them. In order to do this the key question has to be "what can I do within my community without the aid of government help?" rather than "what government grants can we get?" Unfortunately this is a very difficult proposition to answer and perhaps should become the keynote theme for future conferences on the future of rural communities in Quebec.

Gordon Bachman

Fall land preparation, surface drainage, early seeding

Profit with Cereals

by G. Barnett and
J. E. Comeau,
Ferme Expérimentale,
La Pocatière

Do cereals pay in Quebec?

According to "Les Statistiques Agricoles 1968", Quebec farmers grew on the average 40 bushels of barley and oats to the acre. If 40 to 50 bushels of grain per acre are required to pay the cost of growing the grain, obviously cereals are not a paying proposition in Quebec. (Indeed, a recent survey in the St-Hyacinthe area figured the per acre costs of wheat production at $80.)

Although some people might classify small grains (particularly oats) as "weeds", let us examine some promising work with cereals in the more northerly parts of Quebec. A farmer in Palmarole, Abitibi, produced 75 bushels per acre of high quality oats. The Experimental Farm at Kapuskasing regularly produces 80 bushels per acre on a field scale and has attained 120 bushels per acre yields. At the La Pocatière Experimental Farm, yields have varied from 80 to 120 bushels per acre for oats, 80 bushels for barley and 60-70 for wheat (all on a field scale).

High cereal grain yields are attainable in Québec — and not only on experimental farms! But how are high yields produced? Examine some of the factors that affect cereal yields.

Factors affecting cereal yields

Cereal yields are a function of many factors: weather, date of seeding, fertility of the soil, weed control, forage plant competition (where cereals act as a nurse crop), variety, pH of the soil, drainage, and soil cultivation.

Considerable care is taken in the selection of a variety for a particular region. Fertilizers are often applied according to soil test to correct deficiencies, and some weed control is exercised. However, the factor most important in producing high yields — the date of seeding — is often overlooked. The superiority of one variety to another may be in the neighbourhood of 5 to 10 per cent. Fertility, in some cases, can account for a 50 per cent difference, depending on the deficiency of one or more elements. But **date of seeding** can result in yield differences up to 200 per cent!

This factor — date of seeding — is the key to high yields. Early seeding by the end of April or first of May not only gives high yields but also quality grain and plants that tend to lodge less.

The investment in an acre of grain is the same whether it is seeded early or late. But the return on that investment is much higher with early seeding. Indeed, we have found that barley yields decrease by about one bushel per acre per day for each day seeding is retarded from May 1 to about May 12. But from May 20 on, the yield decrease for each day seeding is delayed is three bushels per acre.

It should be reasonable to expect that yield would decrease as seeding is delayed. An extreme case would be to seed spring wheat in August. Obviously the plant will not have time to produce grain before fall frosts. Late seeding forces the plant to produce grain in a shorter growing period and, obviously, plants under such conditions will not have time to produce high yields and plump grain. By seeding late, an unnatural stress is placed on the cereal.

Furthermore, not only is the yield lower, but the quality of that yield is less. For example, a bushel of late-seeded oats weighs less. This occurs because the hull of the oat is formed first and then the kernel. If the growing season is shortened, there will be relatively more hull as compared to kernel.

Early-seeded grain ripens earlier allowing harvest in August when drying conditions are more favourable. Chances of rain and wet soil conditions are much less and harvest is more easily affected. It has also been observed that early-seeded grain tends to lodge less. And if the grain can be harvested earlier, then the fall work can also be accomplished sooner. Generally the earlier fall ploughing can be done, the better will be the weed control the following year.

Cereal adaptation

a) **General climate**

Consider the adaptation of cereals to the climate of Quebec. Wheat is a cool-season crop making growth at 39°F with an optimum of 77°F. Optimum pre-harvest temperatures are 58-60°F with an optimum rainfall of four-six inches in the two months before harvest.

Barley grows particularly well where the ripening season is cool and long with a moderate rainfall. Common oats make their best growth in cool, moist regions with moderate to high rainfall.

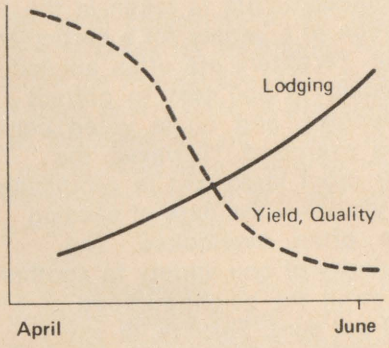
The marginal areas of Quebec have a mean summer temperature of about 60°F with 110 to 120 frost-free days. At least 17 inches of rain falls from May to October 1. Cereals are well adapted to the climate of Quebec.

b) **Cereal physiology and environmental conditions**

Examine environmental requirements for high cereal yields. To produce a high yield, cereals need a well-developed root system and abundant tillers. To develop such a root system, cool soil and air temperatures are needed. If the soil and air temperatures are too high at seeding, the shoots will develop before the roots are well established. When do these cool temperatures occur? It is early in the spring!

Cereals need short days followed by long days for high yields. Don't short days occur early in the spring and get longer as the 21st of June approaches? High-yielding cereals need a lot of water between emergence and grain formation. When is the soil filled with water? Is it not early in the spring? The table falls until late July.

At 39°F, cereals start to germinate — only 7°F above freezing. To profit from the high soil moisture, low temperatures and short days, cereals must be seeded early — end of April to May 15 in the marginal areas of Quebec; April 15 on the Plain of Montreal. Early seeding may mean putting on a Mackinaw coat or a snowmobile suit, but it is the key to profit.



DATE SEEDING

As seeding is delayed yields decrease, quality decreases and lodging increases.

Cereals as a nurse crop

Before the arguments (besides cold feet!) often used against early seeding are examined, look at one more subject — the nurse crop.

Cereals have traditionally been grown as a nurse crop for hay and pasture plants. When corn or potatoes are grown, a monoculture is the objective. All other plants — weeds — are controlled because weeds reduce yields. But when cereals are grown, competing species (grasses and legumes) are deliberately planted with the oats or barley. Furthermore, the rate of seeding for the cereals is reduced so the legumes and grasses won't be smothered. At the same time by using a nurse crop the hay species establishment is weakened. It is often noticed where the cereals were thin that the hay species are more abundant and lush — not spindly and sparse as they are where the grain is thick.

Two crops (hay and cereals) are planted at the same time but the statistics refer to them as cereals only! Then the yields for these "cereals" are compared to corn yields and it is deducted that cereals don't pay! To make such a comparison valid, yields from a corn field infested with witch grass should be selected! If cereals are to be grown as grain, then they must be grown in monoculture.

Arguments from the farmer against early seeding

Examine some of the arguments as to why farmers think they can't seed early. They say that cereals seeded early will freeze because they are full of water. Do pastures and hay freeze when late frosts strike in the spring? The grasses and legumes are full of water too. At Kapuskasing, in 1968, cereals that had been seeded early and were up were subjected to three late spring frosts and remained unaffected. In 1973 the soil of a field of wheat planted March 29 in Verchères froze to a depth of 1½ inches for a period of four days. That field yielded 1¾ tons per acre of wheat! Pastures and hayfields start to get green around the first of May. If it is warm enough for grasses to grow, cereals will grow too — the two are closely related. Remember, cereals start to germinate at 39°F.

It may be said that the soil is still frozen from three or four inches and below and that only the surface has thawed. So? Remember the photos of the huge cabbages and other vegetables grown on the permafrost in Alaska and the Yukon? These soils never thaw below a foot and a half. Further-

more, for cereals, the soil will have thawed by the time the roots are ready to penetrate deeply.

There are still snowbanks in the field? If a snowbank blocks the road, then take the tractor and plough open the way to the field which is likely dry at the surface and ready to seed.

But, the farmers say, the field can't be disked early in the spring because the soil is too wet. Here they are right — the soil isn't dry enough to support a tractor pulling a disk. If a wet clay soil is disked it will form clods, sometimes taking two years to break down. If early seeding is desired, how can this problem of soil preparation be overcome?

Fall land preparation

Look at one of the two points that permit early seeding — fall land preparation. To profit from early seeding, as much soil preparation in the fall as possible must be done. At seeding time there is not a day to lose. If it takes a day to disk and harrow a field and it rains for a week thereafter, that day of disking, when the field could have been seeded, is a costly one. But had that disking been done in the fall, the field could have been seeded as soon as it had a dry crust which would support a tractor and seeder.

It has been noticed over several years at La Pocatière that when the ice goes out of the lakes, rains become more frequent. Therefore, if the good weather is missed that often occurs after snowmelt and before the lakes thaw, the next period of good weather may not occur for another 10 days and seeding is delayed.

Disking in the spring destroys the good soil structure formed by roots of the previous crop and by freezing and thawing effects of the winter. Disking in the spring is to be discouraged because of the damage to the soil structure.

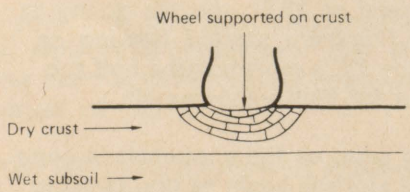
The soil may be too wet in the fall to do a good job of ploughing and disking. Such operations — particularly on clay soils — may result in clodding. This has sometimes been the case at La Pocatière. However, the effects of freezing and thawing reduced such cloddy soils to a fine seedbed by spring.

We have found harrowing (with a spring-tooth) to be beneficial just before seeding fall-prepared land. Most important is the weed controlling effects of harrowing 1½ to two inches of loose soil, even if a herbicide is used. Weeds in the loose soil, which tend to be dry, are at a disadvantage to the cereal seeds placed at 1½ inches on the wet subsoil. Furthermore, harrowing to produce a loose layer allows better seed cover. This is particularly true if fall-prepared soils are let dry too long and if they form a crust. Spring harrowing also causes the loose soil to react as a mulch which conserves soil water.

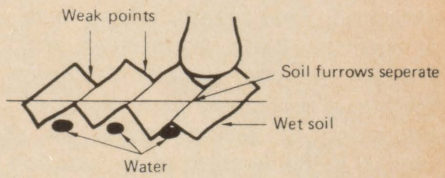
Fall-prepared soils resettle to a stable firm seedbed. Once harrowing has produced 1½ to two inches of loose soil, the disks of the seeder will penetrate and place the seed on the humid subsoil at a uniform depth. Often soils disked in the spring are so loose that the seed is placed at uneven depths — —no control over seed depth can be made. Furthermore with soils worked to four inches, the seed is placed not only at non-uniform depths but in a desert-dry environment. Seeds planted too deep and unevenly mean misses, uneven growth, and uneven maturity. Fall-prepared soils are the key to early seeding and high yields.

Surface drainage

But the farmers say they still can't seed early because there are wet spots in the fields. Detour those spots and seed the 80 per cent of the field that is ready! Is it reasonable to lose the high yield on the 80 per cent because 20 per cent of the field is not ready? The answer to wet spots is land-forming. Fields should be formed

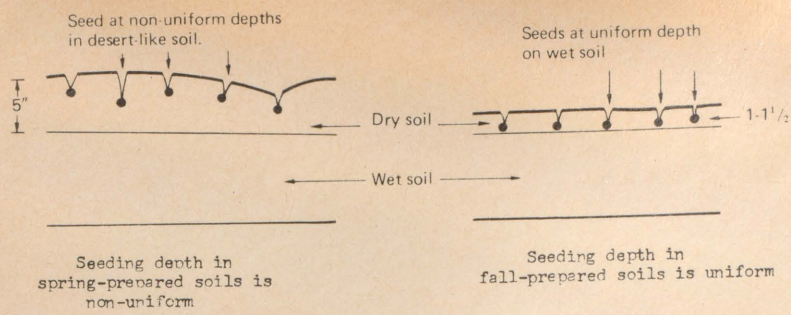


Fall prepared:in spring

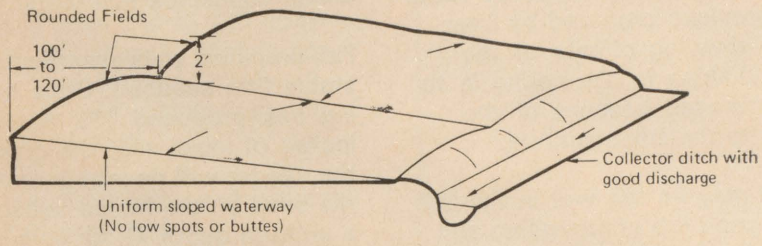


Plowed in fall to be disked in spring

Fall prepared soils allow seeding to be accomplished earlier. They provide better support for machinery.



Because fall-prepared soils have a solid footing, seeds are placed on a wet subsoil at a uniform depth, favouring cereal growth more than weed growth.



It is not tile drainage but surface drainage that is needed to remove the snowmelt for early seeding in Québec (mid-April to mid-May).

into sections or beds slightly higher at the centre, sloping gently to a shallow ditch. Ditches don't need to be deep. It is not depth that counts but the uniformity of the slope of the ditch to a discharge. There should be no camel effect humps and depressions. Landforming includes the removal of humps and filling of depressions in the beds and in the waterways. The formation of beds 100 to 120 feet or more wide and with centres two feet above the waterways has been quite adequate at La Pocatière. This permits rapid surface drainage and does not impede machine operations.

Surface drainage systems need maintenance — they must be planned when the fall work is executed. This means taking care to maintain beds, waterways and ditches. All obstructions that may fall into a waterway as a result of ploughing or disking must be removed if the system is to function in the spring and remove water from the snowmelt efficiently.

It is sometimes suggested that a tile drainage system is needed to regulate ponding at the surface. Generally, simple landforming will remove such potholes. Tile drainage systems are useful to drain springs and lower the water table. For cereals it is doubtful that tile systems are a paying proposition. It is sometimes suggested that the installation of such a system will allow earlier seeding. This is true in a conventional system with disking in the spring but if the disking is done in the fall, this advantage is lost. Furthermore it does not seem reasonable to pass all that snowmelt at the surface — or even part of it — through two or three feet of soil to a drain. In addition, tile drains are quite often still frozen when cereals should be seeded. Indeed in 1970, the tile drains at La Pocatière started flowing on June 12, a month and a half too late for high yield cereals.

As soon as the snowmelt is gone the soil will begin to dry. In 10 to 15 days after the snow is gone, an inch or two at the surface of the soil will be dry (two-three inches in a coarser textured soil). When the surface is grey the soil will support a tractor and seeder. It will be too wet to disk but dry enough to harrow with a spring-tooth. This is the system that has allowed the experimental farms to seed early — fall preparation and surface drainage (even on tiled fields).

Date of seeding (Barley (1971))	Yeld (Bu/Ac)	Bushel weight
April 29.....	131	51.1
May 14.....	103	50.7
June 1.....	72	49.5

As seeding date is retarded, yield and quality of grain decrease. Early seeding can double yields (sometimes even quadruple them).

Other points of importance

On hillsides, soil erosion may assume importance. Measures such as diversionary ditches and grassed waterways may need to be utilized. Another point to underline is that with early seeding, seed treated with a fungicide should be used.

Conclusion:

With the horse the farmer could plant earlier even if the soil was wet because he had traction. Today with a five- or 10-ton tractor trailing a 10-foot disk buried as deeply as the tractor can pull (cereals still are seeded at 1½ inches!) the farmer has to wait until the soil is dry enough to disk. Naturally the farmer can't seed as early today as he used to — he is using horse technology in a tractor age — he is disking in the spring. To seed early, we must adopt a technology suitable to the tractor.

Cereal production for grain in Quebec? Certainly cereals have a future if we stop using them as nurse crops and grow them in a monoculture system with early seeding. Fall land preparation and surface drainage are the keys to early seeding and to those profitable high yields!

Convocation, June 1, 1974

Honorary Degree

Mr. Chancellor, it is my honour and privilege to present to you, and to this Convocation, Dr. Patrick McTaggart-Cowan, Member of the Order of the British Empire, Executive Director, Science Council of Canada.

A native of Scotland, Dr. McTaggart-Cowan studied at and received degrees first from the University of British Columbia, then from Oxford, which he attended as a Rhodes Scholar

A distinguished career in environmental matters began in England with the British Meteorological Office. Then, in Newfoundland through the years 1937 to 1942, he pioneered North Atlantic meteorology, and its role in trans-Atlantic aviation. During the critical wartime years, Newfoundland was the western anchor point of the Allied lifeline; air support of surface convoys, and air transport of material and personnel to western Europe placed heavy demands upon Dr. McTaggart-Cowan, bringing him eventually to Dorval as Chief Meteorological Officer of the Royal Air Force Ferry Command, whose accomplishments have become legend; our distinguished guest is himself a part of that legend.

The post-war years found Dr. McTaggart-Cowan at headquarters, Meteorological Service of Canada, of which he became Director in 1959. His Directorship was a period of strong expansion in meteorological research and development in the Canadian service. On the international scene, he has at various times played strong roles in such bodies as the International Civil Aviation Organization and the World Meteorological Organization, as well as in the professional societies of which he is a respected member.

Following a term as President, Simon Fraser University, Dr. McTaggart-Cowan became Executive Director, Science Council of Canada. Here he has turned his attentions to matters of science policy, particularly as related to our environment. We all recall the disastrous oil spill a few years ago, when the "Arrow" ran aground in Chedabucto Bay; our distinguished guest himself directed the task force which undertook successfully the formidable job of environmental clean-up.

We welcome a friend of McGill University and of this Faculty, and a concerned friend of the environment, whom I present to you, Mr. Chancellor, for the degree of Doctor of Science, *honoris causa.*

Professor R. H. Douglas,
Chairman,
Department of Agricultural Physics

Convocation Address

I think that you who are graduating in agriculture today have one of the most exciting careers imaginable ahead of you.

You will have a variety of choices of direction because the boundaries of agricultural involvement are expanding rapidly. As man's understanding of his environment and the ecosystem of which he is a part improves, as our understanding of the full meaning of multiple resource management develops, the contributions of those who have studied in the many fields of agricultural science are seen to have greater and broader relevance.

Within a few weeks, the faculties of agriculture and veterinary medicine at all Canadian universities will have produced a National Statement of their roles and their goals. This will be a milestone in academic development in Canada wherein all university base components of two such ubiquitous fields of knowledge as agriculture and veterinary medicine at Canadian universities have come together in their forward planning, will stay together and have their common horizons to their science for Canada, and for the world, clearly in focus. It is my hope that, challenged with this leadership, the federal and provincial governments will work out urgently a much needed rationalization of their roles and their goals, so that the universities will receive both the mandate and the money to tackle the many neglected areas and increase their activity in already identified areas to a level commensurate with the seriousness of the problem.

As the Science Council pointed out some four years ago, our record is not a happy one and the faculties of agriculture and veterinary medicine have been and remain badly undernourished. Hopefully, the recent achievements in the drafting of a National Statement will provide the incentive that will lead the other segments to break out of the rigid system which so far has frustrated anything like adequate response.

To fully justify these statements would take much longer than the rigorous constraints of 15 minutes

which tradition places upon me on this occasion, so let me just touch on five points which currently are uppermost in my mind.

First, I hope you will remain constantly alert to recognize very simple questions which have been ignored, lacunae of ignorance built on prejudice or tradition rather than on understanding. For example, I am an amateur apiarist but at the same time I am a physicist who knows a little bit about meteorology, and I have been having a lot of fun with a very simple question. Why do most commercial apiarists paint their hives white? Would another colour, say brown, not be better in the Canadian climate? As I say, I am enjoying this little search, but if I was a commercial apiarist with several thousand hives it would cease to be funny and become serious, particularly with honey a dollar a pound, retail.

Secondly agriculture is riddled with subsidies and I am not against subsidies at the right time and the right place, but I tend to look on government subsidies as off-sets to ignorance. We should use our brains and our resources to attack these areas of ignorance. For example our economic theory is built on a philosophy of scarcity, Marketing Boards on a theory of surpluses and subsidies on a theory of poverty — how can we put the three together and make any long-term sense?

Thirdly, I am concerned about the posture of agriculture in what might be called the domain of ecological economics. I am not impressed by much of what I see in the journals on agricultural economics in general. I could describe it, somewhat unfairly, as based on the theories of Adam Smith embroidered by Keynes which is seldom relevant to today's problems. In ecology there is a general principle that security lies in diversity. We seem to be heading in the opposite direction towards large areas of monoculture and major control by marketing boards or associations. I am not against monopolies, but if there is a monopoly situation I think it should be recognized. But when I see a two-pound packet of bees rising from $8. to $20. in one year, it suggests to me that there is some instability in the system which we should understand. University researchers have the independence to not only do this research but be seen to be independent while doing it. I have no answers but I have a deep concern that we are heading into trouble surrounded by a large measure of affluent ignorance, and we seem to be unwilling to finance the universities at a level to get this urgent research underway.

Fourthly, much of the world's agricultural strategy has been developed since World War II, that is, in the last 30 years. From a climatic point of view, this has been an anomalous period, free from very large fluctuations. But there are indications that this quiescent period has come to an end. We can expect over the next period much greater year to year fluctuations in meteorological conditions. I think we should be looking back at some of the fluctuations which have occurred over the last 100 or 200 years, and interpolating them into the kinds of world problems which we would have to cope with today, if they recurred. I think our agricultural economics, our agricultural transportation system storage, world stock concepts and the list goes on and one, are all in need of major rethinking. Is the seven-year drought in Sahalia climatologically unique? How about the seven lean years recorded in the Old Testament? I think we urgently need to reexamine almost all our agricultural strategies. I still recollect some mad scrambling at the federal level in the 50s when parts of the Prairies were pretty wet and all the agricultural aid programs on the statute books dealt with the drought conditions of the 30s. Are we going to sit idly by and wait for the inevitable crisis? Surely we have the wit and the will to start thinking. The warning flags are up.

Finally, the high energy, high entropy route that agriculture has been travelling in the last 30 years, is, to me, a tremendous source of concern. We tend to ridicule and heap scorn on General Motors, Ford, and Chrysler for having taken the North American automotive industry on the high energy, high entropy route and applaud from a safe distance, comfortably sconced in our large car, the rather dramatic turn around to which they are having to adjust. But, have we really been paying attention to agriculture? Are we sure that we are not in even a worse situation? We seem to be at the point where we consume energy equivalent to a gallon of gasoline in order to produce one bushel of corn. Is that better than the automobile industry?

I was able to get some figures from a recent article in Science (19 April 1974). In the last 30 years, the energy used on the farm

Dr. R. E. Bell, Principal of McGill University, accompanies Dr. P. D. McTaggart-Cowan into Convocation ceremonies. Following is the Chancellor of McGill, Dr. Donald Hebb.
Photo by Ralph Emery.

has quadrupled. The food processing industry's use of energy has trebled and the commercial and "home-side" of the food system has also trebled its use of energy.

Sixty years ago we got a calorie out for each calorie of input in the food system. Now we have to input nine calories for each calorie we get out.

The arguments advanced by the quick-fix technological optimists are that we can always get more out if we just pour enough energy into the system, and that no other major changes are required. The recent history in the United States, the only one I am able to examine in some detail, does not support that view. From every aspect, the "law of diminishing returns" seems to be firmly in control. In the light of these warnings, surely we cannot afford to keep on the high energy route while energy shortages and higher prices stare us in the face. Certainly we must afford all the energy we need to produce food for the nation and for the world, but I suggest that our perceptions of the need should be seriously and urgently questioned. The stakes are high. The universities must take the lead, because the vanguard of researchers, if we are to scrutinize every sacred cow we have in every barn or yard, must not be trapped in the system if it is to be objectively questioned. The challenge will be to design lower entropy agricultural systems.

With these exciting prospects I really do not need to wish you good fortune as you start your careers, but I do most sincerely wish you much wisdom and good luck. You will need both, and above all, keep thinking.

Dr. P. D. McTaggart-Cowan,
Executive Director,
Science Council of Canada.

Faculty of Agriculture

Diploma in Agriculture

Candidates presented by Professor N. C. Lawson, Director of the Diploma Course

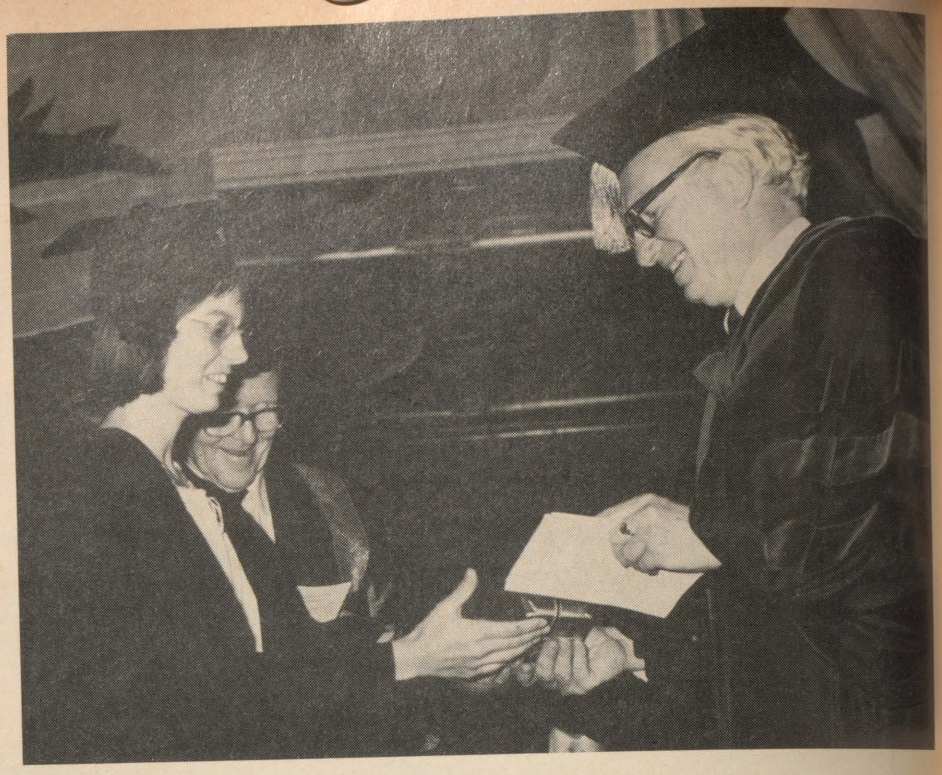
*Bienz, Peter, Lacolle, Que., Honours;
Bussières, Michel, Frelighsburg, Que., Honours;
Clelland, William N., Montreal, Que., First Class Honours; Ralston Purina Prize for Project;
Gurd, Deborah F., Austin, Que., Honours;
Habel, Joan E., Baie d'Urfé, Que., First Class Honours; Minister of Agriculture and Colonization Silver Medal;
Hodsman, Joan M., Ste. Anne de Bellevue, Que., First Class Honours; Minister of Agriculture and Colonization Gold Medal;
Johnson, Douglas, Beaconsfield, Que., First Class Honours;
L'Ecuyer, John, Montreal, Que.;
*McClintock, Murray E., Ormstown, Que.;
Messier, Noel, Ste. Hyacinthe, Que.;
Nwaigwe, Leo, Bishop Shanahan College, Nigeria;
Poirier, N. Bruce, Ste. Anne de Bellevue, Que.;
Robin, Claude, Montreal, Que.;
St. John, Katherine, Dollard des Ormeaux, Que.;
Sullivan, Paul, Two Mountains, Que.;
Walsh, Richard, Huntingdon, Que., Honours.

* — In absentia

Degree of Bachelor of Science in Food Science

Candidates presented by Professor H. R. Neilson, Director of the School of Food Science

Amin, Mohammed Siddiqui, Corentyne, Guyana, (Food Chemistry);
Baker, Susan J., Ste. Anne de Bellevue, Que., (Food Chemistry), First Class Honours; University Scholar; Governor General's Medal;
Bedirian, Papken, Ste. Anne de Bellevue, Que., (Food Science), Honours;
Bonnett, Beverly J., Granby, Que., (Dietetics), Honours;
Bouchard, Dominic, Jonquière, Que., (Food Administration);
Bourque, Jocelyne A.M., St. Jean, Que., (Dietetics);
Cassidy, Deborah L., Kingston, Ont., (Food Administration), First Class Honours; J. W. McConnell Scholar;
Côté, Marie-France, Montreal, Que., (Dietetics);
Coveney, Judith E., Pointe Claire, Que., (Food Administration), Honours;
Dumas, Anne, Beauharnois, Que., (Dietetics), Honours;
Gillis, Gregory H., Dartmouth, N.S., (Food Chemistry);
Giroux, Audrey, Montreal, Que., (Dietetics), Honours;
Greenwood, Carol E., Montreal, Que., (Food Science), First Class Honours; University Scholar; Harrison Prize;
Hill, Jennifer S., Laval, Que., (Food Administration), Honours;
Jones, Margaret A., Farnham, Que., (Dietetics), Honours;
Kelly, Colleen D., Beaconsfield, Que., (Dietitics), Honours;
*Kinsella, James, Pointe Claire, Que., (Food Science), Honours;
Lapsley, Karen G., Pierrefonds, Que., (Consumer Services), Honours;
Nikolaiczuk, Marcia J., Baie d'Urfé, Que., (Dietetics), Honours;
Robinson, Patricia M., Montreal, Que., (Dietetics), Honours;
Ruzgaitis, Dianne F., Montreal, Que., (Dietetics), Honours;



Saunders, Nancy P., Petit Codiac, N.B., (Dietetics);
Service, Colleen M., Osgoode, Ont., (Dietetics), First Class Honours; J. W. McConnell Scholar; Canadian Society of Animal Production Book Prize;
Vickery, Susan D., Pincourt, Que., (Food Science), First Class Honours; University Scholar; Governor General's Medal.

* — In absentia

Degree of Bachelor of Science in Agriculture

Agricultural Sciences Division

Candidates presented by Professor R. S. Broughton, Coordinator

Abdelwahab, Mehdi A., Tetuan, Morocco, (Animal Science), Honours;
Alsop, Janet E., Gunning Cove, N.S., (Animal Science), Honours; J.W. McConnell Scholar;
*Archibald, Stephen K., Truro, N.S., (Animal Science), Honours;
Asnong, Joseph, Pike River, Que., (Agricultural Economics);
*Blenkhorn, Harold D., Beaconsfield, Que., (Soil Science);
Bourgeoys, James, St. Canut, Que., (Plant Science — Horticulture);
Brunst, Anthony S., Rigaud, Que., (General Agriculture), Honours;
Butt, Edward, Bay St. George, Nfld., (Soil Science), Honours;
Cadotte, Gilles, Montreal, Que., (General Agriculture), Honours;
Chang, Alexander S-W., St. Eustache, Que., (Soil Science);
Conlon, Peter D., Baie d'Urfé, Que., (Animal Science), Honours;
Cyr, Pierre G., St. Basile, N.B., (Plant Science — Agronomy);
Doonan, Gordon R., Montreal, Que., (Animal Science), Honours;
Drummond, Barrie A., Bristol, Que., (General Agriculture), Honours;
England, Lorraine D., Ottawa, Ont., (Animal Science), First Class Honours;
Ferguson, Jo-Ann, Charlottetown, P.E.I., (Plant Science — Horticulture);
Hunter, R. Chipman, Kirkland, Que., (Animal Science);
Langille, Donna, Tatamagouche, N.S., (Animal Science), Honours;
Ledoux, Yves, Pointe-aux-Trembles, Que., (General Agriculture);
Lemay, Roch, Montreal North, Que., (Animal Science), Honours;
Lister, Ross B., Harvey Station, N.B., (Agricultural Economics);
Lohé, Jean-Yves, Sherrington, Que., (Plant Science — Horticulture), First Class Honours; University Scholar;
Lussier, Serge, Laprairie, Que., (Plant Science — Agronomy), Honours;
MacPhail, Paul R., Cornwall, P.E.I., (Plant Science — Horticulture), Honours;
*McKay, Peter M., Whitby, Ont.; (General Agriculture), Honours;
McWilliams, Allen H., Verdun, Que., (General Agriculture), Honours;
Omer, Richard A., Ste. Anne de Bellevue, Que., (Animal Science), Honours;
Parker, Ronald O. Montreal, Que., (Animal Science);
Parkinson, Brent E., Rawdon, Que., (General Agriculture), First Class Honours;
*Phillip, Leroy S., Basseterre, St. Kitts, W. I., (Animal Science), First Class Honours; J. W. McConnell Scholar;
Smith, Alford L., Amherst, N.S., (Plant Science — Agronomy), Honours;
Sohmer, Joseph K., Montreal, Que., (Animal Science), Honours;
Stewart, William R., Athelstan, Que., (General Agriculture), Honours;
Sutherland, Donald W., Truro, N.S., (Plant Science — Agronomy), First Class Honours; Cutler Shield;
*Tan, Eow Huat, Penang, Malaysia, (Soil Science), Honours;
Thompson,, Charles N., Oxford, N.S. (Plant Science — Horticulture), First Class Honours; University Scholar;
Thorne, Eric A., Havelock, N.B., (Animal Science);
Trenholm, James R., Moncton, N.B., (Plant Science — Horticulture);
Turcke, A. Frances, Tracy, Que., (Plant Science — Horticulture), First Class Honours;
*Vergeylen, Charles A., Baie d'Urfé, Que., (Animal Science), Honours;
Walsh, Daniel, St. Lazare, Que., (Animal Science);
Wera, Jacques A., Lennoxville, Que., (Animal Science);

Left: Joan Hodsman, Diploma Graduate, receiving her gold medal from Vice-Principal A. C. Blackwood.
Right: Enrique Garino, who received his Master's Degree, being congratulated by Principal Bell.
Photos by Ralph Emery.

Yelle, Paul Emile, St. Remi, Que., (Plant Science — Horticulture), First Class Honours; J. W. McConnell Scholar;
Zollinger, Marcel W., Ste. Anne de Bellevue, Que., (General Agriculture), Honours.

* — In absentia

Biological Sciences Division

Candidates presented by Professor R. A. MacLeod

Bergeron, James M. St. Hilaire, Que., (Environmental Biology);
*Charlebois, Gilles, Coteau Station, Que., (Microbiology);
*Craig, William E., Kentville, N.S., (Environmental Biology), Honours;
Day, M. Lorraine, Pierrefonds, Que., (Microbiology), Honours;
Groulx, Claude, Vaudreuil, Que., (Microbiology);
Harris, Paul W., Greenfield Park, Que., (Environmental Biology), Honours;
Hashim, Ismail B., Seriab, Malaysia, (Botanical Sciences), Honours;
Hoag, Howard A., Trois-Rivières, Que., (Environmental Biology);
Holt, Jacqueline M., Hudson, Que., (Environmental Biology), Honours;
Horner, Stephen R., Pointe Claire, Que., (Environmental Biology), Honours;
MacAuly, M. Joy, Ottawa, Ont., (Microbiology); Honours;
Molnar, Laura A., Beaconsfield, Que., (Environmental Biology);
O'Loughlin, Richard, Beaconsfield, Que., (Environmental Biology), Honours;
*Sylvester, Thomas W., Pointe Claire, Que., (Environmental Biology), Honours;
Lochhead Memorial Prize;
Takeda Richard, Farnham, Que., (Environmental Biology), Honours;
Taylor, Deborah A., Senneville, Que., (Microbiology), Honours;
Wishart, Carol A. C., North Vancouver, B.C., (Microbiology), First Class Honours; University Scholar; Gray Medal.

* — In absentia

Renewable Resources Development Division

Candidates presented by Professor A. F. MacKenzie, Coordinator

Aubin, J.P.G. Robert, Pointe Claire, Que., (Community Resource Development);
Castagner, Michel A., Pointe Claire, Que., (Wildlife Resources), Honours;
Cooke, Sally J. E., Beaconsfield, Que., (Wildlife Resources);
Curry, John A., Baie d'Urfé, Que., (Agricultural Land Planning Development), Honours;
Curry, Peter J. W., Baie d'Urfé, Que., (Environmental Conservation), Honours;
Gendron, James T., Gimli, Man., (Wildlife Resources), Honours;
*George, Noreen E., Arichat, N.S., (Community Resource Development), First Class Honours; J. W. McConnell Scholar;
Knox, Peter D.L., Trinidad, W. I., (Wildlife Resources);
Lapointe, Charles, Verdun, Que., (Environmental Conservation), Honours;
Levesque, Richard F., Beaconsfield, Que., (Environmental Conservation), Honours (Posthumously);
Logan, Robert J., Baie d'Urfé, Que., (Environmental Conservation), Honours;
Montgrain, Gilles, St. Lambert, Que., (Public Service and Administration);
O'Neil, J. Kevin, Lachine, Que., (Wildlife Resources), Honours;
Schofield, Michael H., Senneville, Que., (Environmental Conservation), Honours;
Smith, C. A. Scott, Beaconsfield, Que., (Environmental Conservation);
Stewart, Gary R., Ste. Anne de Bellevue, Que., (Wildlife Resources), Honours;
Terauds, Peeris G., Cowansville, Que., (Wildlife Resources);
Vizbar, Judith-Anne, Franklin Centre, Que., (Wildlife Resources), Honours.

* — In absentia

Degree of Bachelor of Science in Agricultural Engineering

Candidates presented by Professor J. R. Ogilvie, Chairman, Department of Agricultural Engineering

Chasse, Maurice R., Ste. Anne de Bellevue, Que.;
Eades, George V., Timmins, Ont.;
Ferdinand, James J., Ile Perrot, Que.;
Hare, Brian J., Chateauguay, Que.;
*Himelman, Donald E., Middle Musquodoboit, N.S., Honours;
Levesque, Claude P., Beaconsfield, Que.;
Nahas, Jean-Pierre, Duvernay, Que., Honours;
Savoie, Philippe H., Montreal, Que., First Class Honours; University Scholar.

* — In absentia

Faculty of Graduate Studies and Research

Candidates presented by Professor T. H. Barton, Pro-Dean of the Faculty of Graduate Studies and Research

Master of Science

Arnold, Neville P., B.Sc. (Sir George Williams), Quebec (Horticulture);
Benoit, Claude, B.Sc. (Sherbrooke), Quebec (Microbiology);
*Carmichael, Raymond P., B.Sc. (Agr.), (McGill), New Brunswick (Agronomy);
*Cochrane, Stanley G., B.Sc. (Manitoba), Nova Scotia (Entomology);
*Coffin, Robert H., B.Sc. (Agr.) (McGill), Prince Edward Island (Horticulture);
Foroud, Nader, M.S. in Irrigation (Tehran), Iran (Agricultural Engineering);
Garino, Enrique Jose, B.Sc. (Agr.) (McGill), Argentina (Animal Science);
*Khan, Shakil Ahmad, B.Sc. (Muslim); M.Sc. (Muslim); M.Sc. (Sind), West Pakistan (Plant Pathology);
*Kirton, Noel W., B.Sc. (Agr.) (McGill), West Indies (Agronomy);
Lim, Kiok-Puan, B.Sc. (Taiwan), Malaysia (Entomology);
Sheppard, James W., B.Sc. (Agr.) McGill), New Brunswick (Plant Pathology).

* — In absentia

Doctor of Philosophy

*Bailey, Clyde G., B.Sc. (Manitoba); M.Sc. (Saskatchewan), Trinidad (Entomology).
"Population Dynamics, Bioenergetics and Feeding Biology of Melanoplus bivittatus *(Say) and* M. femurrubrum *(DeGeer) Orthoptera; Acrididae";*
*Bunch, James N., B. Sc. (Alberta); M.Sc. (Alberta), Saskatchewan (Microbiology).
"Repair of Injury in Escherichia coli After Freezing";
*Dodds, James A., B. Sc. (Leeds); M. Sc. (McGill), England (Plant Pathology)
"Masking of tobacco mosaic virus RNA genome in the coat protein of barley stripe mosaic virus";
*Fein, Jared E., B. Sc. (McGill), Quebec (Microbiology).
"Characterization of Neutral Amino Acid Transport in a Marine Pseudomonad";
Ho, Shin-Kuen, B.Sc. (Biochemistry) (Sir George Williams), China (Animal Science).
"Supplemental dietary copper and the activities of several porcine fatty acyl desaturase systems";
*Journet, Alan R.P., B.Sc., (Wales); B.Sc. (Hons.) (Wales), England (Entomology).
"Systematic study of the Genus Craspedolepta *Enderlien 1921 (Homoptera: Psyllidae) in North America";*
*Levac, L. Daniel, B.A. (Ottawa); B.Sc. (Agr.) (McGill); M.Sc. (McGill); Quebec (Microbiology)
"Microbial Degradation of the Insecticide Elocron by a Soil Bacterium".

* — In absentia

The Family Farm

Published in the interests of the farmers of the province by the Quebec Department of Agriculture

Subsidized Farm Labour

(Text of circular letter to Quebec farmers)

Dear Sir:

Many farmers have informed us of the difficulties they face when they try to hire help. At such times, many workers are looking for jobs and some are even on welfare.

In order to provide farmers with the manpower they need, the Minister of Agriculture has recently approved a new program whose main features are as follows:

a) This program concerns you if you intend to employ one or more workers this year than you did in 1972-73 (between April 1st 1972 and March 31st 1973).

b) The additional worker(s) you plan to hire must be welfare recipients, or farmers who cannot live entirely on the income from their farms.

c) You must pay a minimum wage of $2.75 an hour. The Department of Agriculture will reimburse you $2.06 an hour of this, leaving you only 69 cents an hour to pay.

d) This subsidy, amounting to $85.00 per week, is payable during 30 weeks, thus totaling $2,500 per employee. The maximum amount of subsidy which a single farmer may receive under this program is $10,000.

e) The shortest period of employment eligible for this subsidy is a continuous stretch of 8 weeks, except in the case of market gardeners (horticulturists), apple growers, and maple syrup producers, in which event it is only 3 weeks.

If you are interested in this program, you should contact your local agronome immediately and he will give you the further information required.

Gaétan Lussier,
Deputy Minister of Agriculture,
Quebec, June 4, 1974.

Milk Production

A total of 4.1 billion pounds of milk, valued at $205 million, was sold to dairy product producers in the 12-month period that ended March 31, the Quebec Agricultural Marketing Board says. Another 1.7 billion pounds, valued at $116-million, were sold to milk processors and distributors.

The report says 36,626,038 dozen eggs were sold to distributors for $16.6 million. A total of 376 million pounds of chicken and turkey had a value of $118 million. A total of 14.4 million pounds of tobacco, valued at $7.9 million, was sold by 656 producers.

Equalization of price paid for industrial milk

Under certain conditions, the Quebec Department of Agriculture grants compensation to milk producers in handicapped areas of zone B as described in the sales agreement between the industrial milk producers' Federation (la "Fédération des producteurs de lait industriel") and the industrial milk dealers.

Conditions

1. Only producers of industrial milk whose status as farmer is as defined in the Farm Producers Act (Bill 64) are eligible for this measure.

2. The location of the dairy factory which receives the producer's milk will decide whether the producer belongs to zone B.

3. The dairy plant must undertake to supply the Department with all information needed for the purpose of making the equalization payment.

4. Any false statement will entail cancellation of the subsidy.

Payment

The Department undertakes to reimburse up to 50 per cent of the difference in price existing between zones A and B.

Quebec's Field-Crop Seed Needs

(Draft of speech by Mr. Gaétan Lussier, guest speaker at the closing banquet of the Canadian Seed Trade Association's convention, June 21, 1974.)

I am very glad to be with you this evening and I thank you for your kind invitation to take part in this Congress.

The Minister of Agriculture would have liked to meet you and tell you himself about the seed situation in Quebec and about his Department's position with regard to it.

Unfortunately, he was unable to accept your invitation. However, in delegating me to replace him, he was anxious that I should convey to you his keen interest in your association and especially his appreciation of the fruitful cooperation which exists between his Department and the members of your team.

Mr. Toupin also wishes me to give you his best regards and extend to you a warm invitation to visit Quebec's 12 agricultural regions where you will find, in addition to ever-changing scenery, a variety of crops which should be of the utmost interest to you.

Quebec's total cleared farmland amounts to less than two per cent its total area. Needless to say, the choice of crops is of vital importance if we are to get the most out of the soils of our different regions and from our range of climatic conditions. By way of example, I need only mention that in the central regions in the Montreal plain, grain-corn, soybeans and alfalfa can be grown very successfully, while in Abitibi in northwestern Quebec we are limited to early-maturing crops or those suited to cooler temperatures, such as rapeseed and timothy.

Your Association has a well-established tradition as regards the quality of its seed and the organization of its distribution network throughout the country. It thus plays a role of the very first order in the expansion of our crops and in maintaining the quality of seed sold in Canada and exported.

The Quebec members of your Association are dynamic distributors who provide farmers with seed which corresponds increasingly closely to the recommendations of our Plant Productions Council.

In 1972 we were delighted with your Association's response to our feed grains and forage self-sufficiency program. In 1973 in the case of our "Operation Alfalfa", we were once again made aware of your approval and support and participation in this huge effort to introduce alfalfa into every region.

I might also mention your efforts in favour of spring wheat, which Quebec wished to start growing again. And, quite recently, you agreed to collaborate in increased soybean production. I just wanted to put your efforts in their proper agricultural context and perspective and emphasize how important it is that you take part in the drive towards cereal and forage growing in Quebec.

I should like now to talk to you about the government bodies concerned with advising the Department about varieties to be recommended or multiplied or with producing and distributing pedigreed seed. I will then tell you about Quebec's needs and the potential market involved. Lastly, I wish to stress our agricultural self-supply program which is, of course, absolutely dependent upon the availability of seed.

1. Government bodies concerned

Like other provinces, Quebec relies in the first place on research and trials to ensure that crop varieties shall be the best available, the best adapted, and the best suited to the needs of our farmers. In this respect, the Research branch of the Canada Department of Agriculture with its network of experimental stations and farms constitutes, together with Quebec's agricultural faculties and research stations, the "power-house" that supplies Quebec with the scientific and technical data essential to the promotion and intensification of plant productions.

On this basic organization, we have superimposed an advisory body known in Quebec as the C.P.V.Q. ("Conseil des productions végétales du Québec" or Quebec Plant Productions Council). This body is composed of seven committees and four boards. Each **committee** includes specialists in different fields and its work is centred on crops with a view to recommending the best kinds and varieties. For example, the hay and pasture committee is made up of representatives from those institutions I have just mentioned whose work is related to grasslands, and also of representatives of industry and trade connected with grasslands. The **boards,** on the other hand, have a broader task or mandate and their members are research workers or representatives of industry and trade. For instance, the Seed Board is concerned with the multiplication of seed in general, the status and rights of plant breeders, and the situation as regards seed stocks and channels of distribution.

The C.P.V.Q., besides coordinating the activities of the committees and boards, also has a double responsibility to the Department of Agriculture. It must see to the writing and publishing of growers' guides and, at the same time, pinpoint sectors where research is necessary.

Thanks to the C.P.V.Q., all available expertise is made use of and all energies are channeled towards the goals which the committees and the Department of Agriculture set for themselves.

In the past year, the Department has added a Plant Productions division to that part of its organization which is directly concerned with farm production. This division has been entrusted with the task of bringing field crops, horticulture, maple production, beekeeping and the two provincial laboratories at La Pocatière and St-Hyacinthe under one authority.

Its main task is to ensure the carrying out of the self-sufficiency program in grain and forage. It must, therefore, see to it that the recommended varieties are available to farmers. To do so, it must ensure the multiplication of the best-suited varieties and inform seed distributors about needs for different crops and regions so that the trade can play its part. This is where your Association comes into the picture to provide seed supplies.

2. Seed needs

Because of the constraints imposed by soil and climate, our crops vary from one region to another. However, I shall limit my remarks to the main crops and to annual seedings. First come the grasslands which are the mainstay of our dairy production. They cover over 2.6 million acres, 25 per cent of which are resown every year to timothy, red clover, and alfalfa. Quebec is intensifying its grassland crops by means of "Operation Alfalfa" calling for 200,000 more acres of this legume in 1974. Our forage seed requirements may thus be estimated at more than six million pounds of timothy, at four million pounds of red clover, and two million pounds of alfalfa.

Next, cereals and corn take up over 1.1 million acres, of which 670,000 are sown to oats, while the other cereals — wheat, barley, and mixed grains — occupy 230,000 acres. Grain-corn and fodder corn amount to over 300,000 acres.

Our seed needs are therefore as follows:

oats	1,675,000	bushels
wheat	100,000	bushels
barley	110,000	bushels
mixed grains	250,000	bushels
corn	100,000	bushels

I should also mention soybeans, seedings of which might amount to 10,000 acres and require 15,000 bushels.

3. Seed produced in Quebec

Quebec's seed requirements are comparatively large and by far the larger part comes from elsewhere. For instance, 81 per cent of wheat seed, 93 per cent of oat seed and 70 per cent of barley seed sown here come from outside Quebec. And, as regards forage seed, Quebec produces about four per cent of its requirements for timothy and red clover and, in the case of alfalfa has to obtain all its seed supplies from outside markets. Without the shadow of a doubt, this demonstrates both Quebec's great dependence and the importance of your own role in this big field-crops sector.

4. Self-sufficiency

As I have already stated to the millers, the future of all our livestock productions is intimately bound up with that of our domestic production of grain and forage. Quebec can produce more feed grains and increase the amount and improve the quality of its forage.

For the second year in succession, we are therefore making a very intense promotional effort to introduce high-yielding spring wheats, namely Opal, Pitic 62 and Glenlea. Our promotion is being backed by a per-acre grant to farmers taking part in this program. In the case of fodder corn, alfalfa, and soybeans, Quebec is resorting to regional competitions. Its promotional efforts are also supported by demonstrations where farmers can see recommended kinds and varieties being grown under actual field conditions. During such organized visits, they can find out about the growing methods used to obtain such results.

Quebec is also anxious to add to its high-protein crops and has therefore joined the field bean (small faba bean or horsebean) growing club.

Having implicit confidence in its self-sufficiency program, the Quebec Department of Agriculture has already obtained testimonies from many farmers proving that the integration of plant productions with livestock productions on their farms is the most effective way to make them profitable.

But, if this ambitious program is to be fully realized, our farmers must be able to count on supplies of seed of the recommended kinds and varieties in quantities sufficient for their needs.

The Quebec Department of Agriculture has no desire to replace private enterprise in multiplying the seeds which are required here, but is bound to intervene if it has

Reading left to right at the Holstein Picnic: Mr. J. E. Powell, retiring from the Canadian Holstein Association; Normand Toupin, Honourable Minister of Agriculture, Martin van Lierop, Extension Department, Macdonald College, and Pierre Léonard, Agronome and Secretary of the Quebec Holstein Association.

reason to fear that there will be a shortage or finds that the seed offered does not meet the standards of quantity and quality recommended by the C.P.V.Q. The way in which the Department would intervene in that event remains to be specified; so far it has been limited to assistance to seed growers at the rate of $4 an acre.

In closing, I want to express my gratitude that so many of you have come to Quebec. I urge you to continue your efforts in favour of pedigreed seed and trust that you will continue to supply the farmers of Canada with the best of seed — to the benefit of their yields and returns and the health of the agricultural economy as a whole.

Holstein Picnic

Take one sunny, warm July Sunday, add a generous number of people, a beautiful farm, plenty of interesting activities and you have the recipe for a very successful picnic!

Sunday, July 7, was just such a day — Macdonald College Farm hosted the Quebec Holstein-Friesian Association Picnic for the second time (the first was July 30, 1953). The farm never looked so beautiful; Farm Director Rudi Dallenbach and his staff worked long hours to prepare a judging ring, displays, luncheon and snack facilities and generally pleasant surroundings for the guests.

Over 2,000 people arrived to enjoy the fun, mostly Holstein dairy farmers with their families, some college personnel and a smattering of city folk. There was never a dull moment! Master of Ceremonies, Pierre Léonard, of the Holstein Association, introduced several showmanship competitions for adults and young people, which gathered large crowds of spectators. These competitions, run both on a team and an individual basis, had the usual elements of professionalism, suspense, and keen interest which are found at most rural fairs. Several teams participated in the Tug-of-War competition. Despite the intense heat of the early afternoon, the strongest and ablest of our Quebec farmers showed themselves willing rope-pullers, cheered on by their families and friends from their various Holstein Clubs. In the cool shade of the Judging Barn, many people enjoyed the colourful displays which were coordinated by the Extension Department of the College. Visitors were able to update their knowledge of Soil Science, Food Science, Weed and Insect Control, Tile Drainage, DHAS, and Water Testing. Throughout the Dairy Barn, the Animal Science Research Projects were explained. Keeping the festivities at a gala level, several Girls' Bands, complete with sparkling drum majorettes and gymnasts, entertained the crowd at lunch time.

Norman Toupin, the Honourable Minister of Agriculture arrived to attend a luncheon given by Dr. A. C. Blackwood, Dean of the Faculty of Agriculture at Macdonald College. Mr. Toupin addressed the crowd and toured the displays and the farm with interest.

A special tribute was paid to Mr. J. E. Powell, Brantford, Ont., who,

Top: Entries in one of the showmanship contests are lined up for the final judging.

Below: Pull! The fun of the Tug-of-War competitions attracted large crowds.

after many years of hard work and valuable contribution, is retiring from the Canadian Holstein Association.

Comments received from guests at the Picnic were largely very enthusiastic. Occasionally one heard "Too darned hot!", but the majority of remarks were "Great Picnic", "Best Ever" or "I saw so many old friends". For a great many people it was a wonderful way to spend a Sunday.

PRIZE WINNERS

Showmanship: MacLeod Trophy

Inter Club

1. Saguenay-Lac St. Jean Club

M. B. Lapointe
Real Lavoie
J. R. Bergerons

2. St. Francis Club

Showmanship: Gladu Trophy:
(18 and over)

1. Bois Franc Club — André Laroche
2. Brome Club — Sheldon Cook
3. Huntingdon — Gordon Bustard

Showmanship: Association Trophy:
(under 18)

1. Compton Club — Daniel Pouliot
2. Rouville Club — Cecile Normandin
3. Richmond Club — Anne Carson

Tug-of-War:

1. Bois Franc Club
2. Huntingdon Club

DHAS Contest

Juniors

Jean Bissonnette
Marie Anne Leduc
J. L. Desilet

Ladies

Mme. Lureen St. Jacques
Mme. M. Blanchette
Mme J. Lacasse

Men

P. Lefebre
U. Couture

Classification Contest:

1. F. Ducharme
2. Y. Vauligny
3. A. Lemaire

This Month with the QWI

Obituary

Mrs. Fred Browne (née Ada Colby), President of Quebec Womens' Institutes 1934-36 passed away at Renfrew, Ontario, on April 9, 1974. Her death takes away one more of those women of outstanding ability who served as leaders of Quebec Women's Institutes with great devotion.

Her youth was spent in the Eastern Townships, and in 1909 she attended the Homemakers' Course at Macdonald College.

In 1914, she was married to Fred S. Browne and came with him to Lennoxville Experimental Station in 1919. Their friendly ways and Mrs. Browne's outstanding musical talents made them many friends.

Mrs. Browne became a member of Ascot Women's Institute in its early years, and her ready wit and smile helped in many difficult spots. She served at County level, both as Secretary and President, and in 1934 became President of Quebec Women's Institutes. She was greatly interested in medical inspection in schools. At this time, she served as Treasurer of F.W.I.C.

After 18 years in Lennoxville, Mr. Browne was transferred to Ottawa Experimental Farm and, as the family were leaving Quebec, Mrs. Browne resigned from her Provincial office.

She is survived by three children and eight grandchildren. She leaves many friends in Quebec Women's Institute circles.

Project Visitation

When asked to write an account of one of the projects of the **Ascot** W. I. (Sherbrooke Co.), I decided that our visitation project was outstanding. It has a real personal touch.

Two of our members got together and made up cards for each member. These cards have the names of two members and the name of an elderly citizen or shut-in to be visited. At each meeting reports of visits are made and cards exchanged.

The results are excellent. Recipients of visits are pleased to have someone to talk to, and they enjoy meeting new people. Getting these elderly citizens to talk of times gone by is an interesting experience for the listeners — it provides a link with the past. Visitors come away with the feeling that they, too, have benefited.

The smiling, sometimes tearful "Goodbye, and do come again real soon" leaves a warm feeling in one's heart. So let's do more of this visiting to ease the loneliness of our truly valuable senior citizens!

W. I. Made Interesting

One special event during the year was a party hosted by the **York** W. I. for all branches in Gaspe County. Approximately 75 people attended. The evening consisted of games, friendly chatter, and a lovely lunch. It was a great chance to get acquainted with those we usually see only at meetings. Another special evening for our branch is our annual Pot Luck Supper. At this meeting each member provides a casserole, rolls, pies, etc., and we eat our supper before our regular meeting. After the meeting, dessert is served. This has proven to be a very popular meeting — understandably so!

Busy Hands

The hands of **Gore** W. I. (Richmond Co.) members have been busy. Quilt squares were brought in to be made up for the Dixville Home and 1,425 cancer squares were handed in. Socks have been knitted for the Richmond Fair. This is an inter-branch contest with the winning pair at each branch competing at the Fair. Eleven handi bags were also handed in.

A petition was signed by the members supporting the aims and work of the Auriga Group. This group, which includes contractors, truckers, farmers, and car dealers, has offered a bounty of $8,250 for persons who pinpoint the worst stretch of secondary highway and largest pothole in the Eastern Townships.

The Abercorn President on the occasion of the 50th Anniversary presented 25-year pins to: Mrs: Grace Righton, Mrs. Nicholas Blesser, and Mrs. Hector Garland.

A Busy, Productive Year

The **Milby** W. I. (Sherbrooke Co.) branch may look back with a measure of satisfaction on their busy and productive program for 1973.

One of the more interesting projects was the renovation of the Club Room, a former schoolhouse prettily situated at the edge of Milby. It has been scrubbed and painted. New curtains have been put up, and a new stove and fridge have been installed. Water has been piped into the tiny kitchenette and it has become a delight to all, thanks to a few very faithful, energetic members. The Ascot W. I. were its first guests.

Milby hosted the County in the Club Room in August and held a special casserole buffet supper to celebrate their 42nd anniversary. Mrs. W. J. Beattie, the oldest member, was presented with a 50-year pin at that meeting.

Mrs. W. J. Beattie, Mrs. Archie Fairbrother, and Mrs. Reg Draper all received Abbie Pritchard "throws" from the Q. W. I. They were much appreciated and gratefully acknowledged.

During the year contributions were made to Lennoxville School Hot Lunch program, to the Community Club Christmas tree for 50 children, to the Legion Poppy program for a scholastic award (Cornelia Orr Memorial Award in Home Economics) to the most outstanding student at AGRHS. Twelve handi bags were filled and 15 Christmas Cheer baskets sent to local shut-ins and elderly. The Wales Home received 15 Christmas gifts and donations were made to the Vesser and Butters Home.

Two demonstrations were greatly enjoyed. Mr. Fortier was invited to demonstrate the care of cameras and the art of taking pictures, and Mr. and Mrs. Vaudry demonstrated the care of cut flowers and the art of floral arrangement.

The Publicity Convener led a group discussion on the value and authenticity of the press in which many interesting and sometimes conflicting ideas were expressed. This most universal method of communication reaches more people than any other means of informing the public of local and world happenings, thus it owes this same public the truth without bias or prejudice.

According to the press, truth has its modifications, e.g., the whole truth, the partial truth, the varnished truth, or unproven facts believed by the reporter to be the truth. It must be admitted it is indeed a difficult task for reporters and editors to sift the grains of truth from the chaff of duplicity and subterfuge when the cancer of political influence has spread its tentacles to every facet of public life.

One general criticism of the press was its accent on the spectacular though seamy side of life — the riots, strikes, robberies, murders — which claim front page headlines while the good and beneficial are generally relegated to a tiny column on any but page one.

However, the newspapers of smaller centres are of much benefit to its public in reporting matters of local interest such as industrial developments and news of church, school, Town Councils, and, last but not least, our W.I. doings. We give much credit to our press for its faithfulness in keeping us in touch, locally, with such areas of interest.

To sum up, it was concluded that we found the "pros" counterbalanced the "cons."

A Social Evening

The **Waterloo-Warden** branch (Shefford Co.) held a social evening a few months ago when they entertained the Granby branches and the Austin W.I. Many members took their husbands along and in spite of the heavy rain and thunderstorms, there was a good attendance. Mrs. Paul Sicard, of Montreal, showed slides of Italy and Spain, which were taken while she and her husband had been on their honeymoon. After the slides, a treasure hunt was held. Pictures of well-known people were tacked around the wall to be identified, and prizes were awarded.

At the conclusion of a most enjoyable evening, refreshments were served by the Waterloo branch.

A Special Year

The **Granby Hill** W.I. in Shefford County is celebrating its 50th Anniversary this year.

The cast of the Sutton W.I. play which won second prize at Macdonald. Left to right: Mrs. Rupert Phelps, Mrs. Lloyd Cook, Mrs. Cedric Patten, Mrs. H. Slanger, and Mrs. Douglas Mudgett.

Picnics are also in the picture. On the last Saturday in June one was held for members, families, and friends. Another is held in the fall. We all bring our own dishes and food. (No one has to spend the evening washing dishes.) The evening is spent playing cards and games.

We have a card party and sale table at the local school to earn money. Visits have included the Museum at Knowlton, Madam Benoit's farm, and Clairol at Knowlton.

At the June meeting Mr. R. van Tauvel and Mrs. Stuart Hawke of St. Helen's School gave a talk on the work the children are doing and showed some of the articles these children with learning disabilities had made. Granby West and Waterloo-Warden were also guests.

A Q.W.I. member sent this recipe in with the following message: "This was given to me by an Ontario W. I. member and when I make it for company they come back for more!")

Stuffed Meat Loaf

pound ground beef
pound lean ground pork
cup dry bread crumbs
½ cup grated carrot
¼ cup finely chopped onion
eggs (beaten)
½ cup milk
teaspoons salt
⅛ teaspoon pepper
teaspoon Worcestershire sauce

Stuffing

1 10-ounce can mushroom stems and pieces (drained)
1 tablespoon finely chopped onion
2 tablespoons butter
2 cups soft bread crumbs
1 tablespoon chopped fresh parsley **or**
1 teaspoon poultry seasoning
¼ teaspoon salt

Mix together ground meats, bread crumbs, carrot, onion and eggs. Add milk, salt, pepper and Worcestershire sauce. Mix lightly, but well.

Place on a double thickness of greased aluminium foil. Shape in a 14 by 8-inch rectangle.

For the stuffing: sauté mushrooms and onion in butter over medium heat. Combine with remaining ingredients. Spread stuffing over meat. Roll the meat starting with the long side. Seal. Bring foil edges together in a tight double fold on the top. Fold ends up, using tight double folds.

Place wrapped meat in shallow pan. Bake at 375 degrees F. for 1 hour.

Open foil and continue baking for 15 minutes or until loaf is brown. This can also be made in layers and baked in a greased casserole dish.

Dear W.I. Members:

I am looking forward to being your new Publicity Convener with rather mixed feelings. It will be interesting to receive all your news, and I am looking forward very much to that, but it will be difficult to follow Mrs. Clark who has done such a wonderful job with the Journal news. I hope you will have patience with me. Any comments will be welcome.

The reports show that the W.I. souvenir pens are selling well. Send your orders to the Q.W.I. office, if you want more but be sure and include postage with your cheque.

Nearly everyone has heard from their convention delegates and several branches report new members. Congratulations!

Thank you to all who have sent Canadian stamps to Australia. These should make nice Canadian souvenirs at the Conference.

Handibags have been filled and sent to the Canadian Save the Children Fund, and also money donations. **Brownburg** sent clothing and knitted articles.

Stanbridge East sent a donation to UNICEF which was collected by the school children. The children received thanks and an award which they will hang in their school.

Good citizenship in action was seen in **Beechgrove** when the W.I., after a quick meeting, rushed out and bought sandwich makings and prepared sandwiches and coffee, and took them to the local firemen who were fighting a barn fire.

Because of the efforts of the **Sawyerville** W.I., the local council has placed waste paper baskets through the village and with the help of the local children they hope to keep their corner of Canada clean.

Gatineau donated money towards apartments for Senior Citizens and **Rupert** planted flowers in the cemetery. They have done this for 37 consecutive years. **Sutton** planted flowers in their Town Hall grounds while **Ascot** entertained Senior Citizens with a hymn sing. Seventy-five persons from a Salvation Army Eventide Home were entertained with songs, etc., by members of **Abbotsford.**

Baldwin-Cartier heard a speaker on the activities of the Victorian Order of Nurses and have two of their members on the V.O.N. board of directors. They also report a big success with the sale of their personal recipes cookbook: proceeds going to "Operation Eyesight."

A publicity evening in **Cowansville,** naming women from Missisquoi County who had reached publicity rank, included the name of Mrs. George Beach, the founder of Q.W.I.

Sympathy is extended to the family of Mrs. Fred Browne (see separate write-up with picture).

Congratulations to **Pioneer** who celebrate their 60th anniversary this year; and **Abercorn** who celebrated their 50th in June, and presented three members with 25-year pins.

Children, in and out of school, are helped by many branches and School Fairs are being sponsored. Marigold seeds and jiffy planters were distributed by **Baldwin-Cartier** to grade one French Immersion children and prizes given. **York** distributed seeds to be grown for their fair, and gave a donation and three trophies to the school. Other branches have given prizes and pins for Public Speaking. **Murdochville** gave scrapbooks and glue to a children's sanitorium.

Brookbury heard a talk on nutrition by a nurse. She deplored the lack of nutritious foods dispensed by the food machines in schools and would like to see more balanced diet foods served by these machines.

A donation towards transportation for children attending speech therapy classes was made by **Ascot,** and **Bury** gave to a student loan fund in memory of a deceased member.

Many Branches have read and studied Bill 22 concerning the language of education in the Province of Quebec, and have sent briefs and comments to their local M.N.A.'s.

W.I. members have been "travelling" to other countries via talks and slides. **East Angus** heard Mrs. Welles Coates give a radio talk on the Peace Gardens on the Manitoba-U.S. border, and saw pictures of Spain, Portugal and Morocco. **Frontier** saw slides of a trip through the Far East and Jerusalem. A **Fordyce** member, who had been to Scotland, told about a W.I. meeting she had attended there, and how she had had the opportunity of a first-hand look at farming in Scotland. **Stanbridge East** heard a talk and saw slides on the Yukon. They also gave a donation to the Institutes in the Yukon and Northwest Territories.

An interesting speaker at **Dewittville** was Mr. Peter Collier, employed by the Montreal Association of the Blind. When asked by blind people, "What good am I now?" his reply is "You are as good as you want to be". This could apply equally well to those of us who are not blind.

Grandmothers were honoured in **Milby** and an elderly, shut-in member in **Austin** was presented with a Q.W.I. Abbey Pritchard mohair throw. This branch has a wheel chair and walking canes on loan.

Two members of **Stanbridge East** took parts in the film "Les Fauchers de Marguerite" seen on channel 2, T.V. on June 10th.

Raising funds is a subject close to all and the ways and means are varied; to mention a few — auctions (silent and otherwise) selling cutters; plants and slip sales; **Shawville** sent "tea by mental telepathy" letters; **Brookbury** is selling a cookbook on supper dishes; a variety show was held by **Compton County** with each branch contributing to the program. **Argenteuil County** branches supported a booth at the Lachute Fair and **Matagami** had one at their Lions' Club Carnival. Some articles that were made and donated by members were judged, given prizes, and then sold for funds.

Roll Calls were both educational and amusing. Among a few of the former were: a nutritious, low calorie recipe; bring a weed and name it; your measurements in the metric system. Fun was had with "sign, say or pay 25 cent fine".

Mrs. J. Robertson.
Q.W.I. Publicity Convener.

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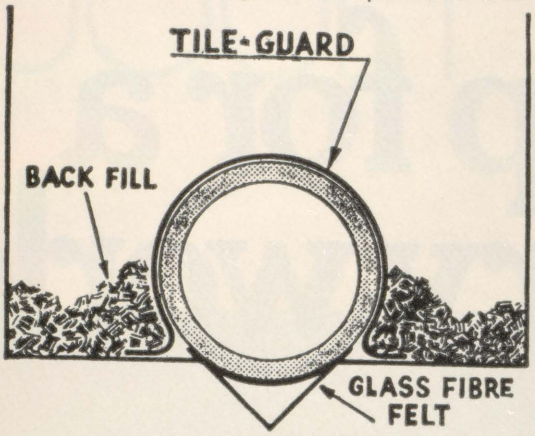

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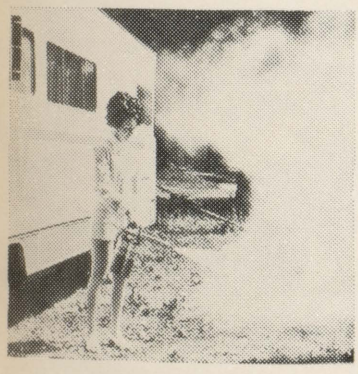

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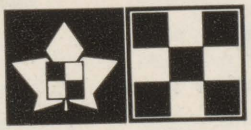

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